United States Environmental Protection Agency
Region V
POLLUTION REPORT

Date: Tuesday, September 09, 2008
From: Mike Ribordy, OSC

To: Linda Nachowicz, epa
Paul Bucholtz, MDEQ
Todd Goeks, NOAA
Michael Chezik, US DOI
David Chung, EPA
Lisa Williams, FWS
Sharon Hanshue, MDNR
Jason El-Zein, U.S. EPA

Subject: Ongoing Time-Critical Removal Activities
Kalamazoo River OU5 - Plainwell Impoundment
Plainwell & Kalamazoo, MI

POLREP No.:	7	**Site #:**	059BBB05
Reporting Period:	05/18/2008 - 08/16/2008	**D.O. #:**	
Start Date:		**Response Authority:**	CERCLA
Mob Date:		**Response Type:**	Time-Critical
Completion Date:		**NPL Status:**	NPL
CERCLIS ID #:		**Incident Category:**	Removal Action
RCRIS ID #:		**Contract #**	

Site Description

In 2007, over 37,000 cubic yards or 1,059 truckloads of PCB-contaminated sediment were removed from the river and nearby banks. This includes removal areas 1, 2, 3A and B, 4A and B, 5, 6A and B, 7 and 8 (see map on Page 2). They have completed work in the Phase 1 coffer dam area with construction of the western water diversion structure (Phase 1 coffer dam), which maintains the current flow of the river over the eastern spillway area. This allowed workers to dredge behind the dam, build a water control structure, and remove the portion of the dam in the former powerhouse area.

So far in 2008, workers have removed sediment and restored banks along some 3,000 feet of riverbank including areas 9A and B, 10A and B, 11B, and 12B (see map on page 2). Work has been completed on mid-channel areas B and C, removal of the Phase 1 cofferdam, and construction of the Phase 2 cofferdam system just upstream of the eastern portion (spillway) of the dam. As of August 11, 2008, some 45,000 cubic yards or 1,289 truckloads of PCB-contaminated sediment have been removed this year. The water control structure, which was constructed during Phase 1, will remain in place in the western channel as a means of managing the water level in the impoundment to facilitate the dredging operations. After the mid-channel and near-shore sediment removal activities are complete, the water control structure will be removed; allowing the Kalamazoo River to flow freely through the new western channel, past what was once the Plainwell Dam.

Excavated Kalamazoo River sediment is being sent off-site to commercial landfills for disposal. Sediment with PCBs above the 50 ppm level will continue to be sent off-site to Environmental Quality Co.'s Wayne Disposal Landfill in Belleville, Mich. Sediment with less than 50 ppm PCBs, which is considered nonhazardous waste, will continue to be sent to Allied Waste's C and C

Landfill near Marshall, Michigan and their Ottawa Farms Landfill near Coopersville, Michigan.

See Pollution Report #1 for additional information.

Current Activities

During the week ending May 17, 2008, Arcadis collected eight sediment samples from Area 9A (TS20052 to TS20059). Arcadis split sample TS20090 with START (Note: The START-designated name for this sample is APS-051408-23-SD/TS20052). The analytical results for these sediment samples indicated PCB levels below the cleanup criteria for sediment.

Arcadis also collected three water samples from the Kalamazoo River (TS30024 to TS30026); one rinsate sample (TS30027), and five water samples from the water treatment system located at Staging Area 4N (W_SA4N_Influ_0001, W_SA4N_MidA_0001, W_SA4N_MidB_0001, W_SA4N_EffluA_0001, and W_SA4N_EffluB_0001). The analytical results for the river samples, the rinsate sample, and the effluent water treatment samples indicated PCB levels below the cleanup criteria for water.

From May 12 to May 14, 2008, Arcadis monitored the turbidity of the Kalamazoo River, near Area 9A, at one upstream location and two downstream locations. From May 14 to May 16, 2008, Arcadis monitored the turbidity, near Area 10A, at one upstream location and two downstream locations. All downstream results were less than twice the upstream results.

Terra continued to excavate sediments from the floodplain sections of Areas11A to 13A, and from Areas 9A and 10A; removed the poles that held the Area 10B turbidity curtain in place; backfilled Area 10B1; staged and loaded sediment at Staging Area 4N; began treating water at Staging Area 4N; and began to grub the trees and vegetation in Area 11B. Terra shipped 120 total loads of non-TSCA-level sediment (5.620.33 tons) to the Ottawa Farms Landfill in Coopersville, MI and the C & C Landfill, in Marshall, MI.

JFNew restored Areas 6B and 6B1 by laying straw and planting shrubs and trees. Note: JFNew was also on site during the weeks ending May 3 and May 10, 2008, at which time they restored Areas 1 to 5A and Areas 3B and 4B.

During the week ending May 24, 2008, Arcadis collected six sediment samples from Area 10A (TS20060 to TS20065). The analytical results for these sediment samples indicated PCB levels below the cleanup criteria for sediment.

Arcadis collected two water samples from the Kalamazoo River (TS30028 and TS30029), and one rinsate sample (TS30030). The analytical results for the river samples and the rinsate sample indicated PCB levels below the cleanup criteria for water.

Arcadis continued taking turbidity readings from three locations in the Kalamazoo River. All downstream turbidity readings were less than twice the upstream turbidity readings.

Arcadis also pulled 30 stop logs from the water control structure.

King Company removed sheet piling and support columns from the Phase 1 Coffer Dam Area. K&H Concrete cut holes into concrete blocks, which Terra placed over the gas pipeline that runs across the Kalamazoo River between Areas 10B and 11B.

Terra removed the access road to Area 3A, and continued restoration activities in Area 9A. Terra also prepared Area 11B for excavation by grubbing trees and installing sheet piling. Excavation activities continued in Areas 10A, 11A, and Mid-Channel C. The turbidity curtain was moved to include Areas 10A and Mid-Channel C. Terra stockpiled and dried TSCA-level sediment in the Area 10B1 floodplain, where it was then directly loaded into trucks. Terra also staged and loaded sediment at Staging Area 4N. Terra shipped a total of 56 loads (2,669.10 tons) of non-TSCA-level sediment to the Ottawa Farms Landfill and the C&C Landfill, and shipped a total of 22 loads (1,034.48 tons) of TSCA-level sediment to Wayne Disposal (EQ) in Belleville, MI.

During the week ending May 31, 2008, Arcadis collected three sediment samples from Area 10B (TS20066 through TS20068) and one sediment sample from Area 11A (TS20069). Arcadis split two samples, TS20068 and TS20069 with START (Note: The START-designated names for these samples are APS-052908-24-SD/TS20068 and APS-052908-25-SD/TS20069). The analytical results for the Arcadis and split sediment samples indicated PCB levels below the cleanup criteria for sediment.

Arcadis collected five water samples from the wastewater treatment system located at Staging Area 4N (W_SA4N_Influ_0002, W_SA4N_MidA_0002, W_SA4N_MidB_ 0002, W_SA4N_EffluA_0002, and W_SA4N_EffluB_0002), two water samples from the Kalamazoo River (TS30031 and TS30033), and one rinsate sample (TS30032). The analytical results for the effluent water treatment samples, the river samples, and the rinsate sample indicated PCB levels below the cleanup criteria for water.

Arcadis also continued taking turbidity readings from two sets of three locations in the Kalamazoo River. All downstream turbidity readings were less than twice the upstream turbidity reading.

Arcadis also pulled 15 stop logs from the water control structure.

Terra continued the removal of the access road to Areas 3A to 5A, and continued the restoration of Areas 9A and 10A, including the removal of the sheet piling in Area 9A. Excavation activities continued in Mid-Channel C and sediment over the gas pipeline. Terra also staged and dried TSCA-level sediment in the Area 10B1 floodplain, where it was then directly loaded into trucks. Terra staged and loaded sediment at Staging Areas 3S and 4N. Terra shipped a total of 31 loads (1,540.25 tons) of non-TSCA-level sediment to the Ottawa Farms Landfill and the C&C Landfill, and shipped a total of 12 loads (564.49 tons) of TSCA-level sediment to Wayne Disposal (EQ).

During the week ending June 7, 2008, Arcadis collected six sediment samples from Area 10A (TS20070 to TS20075). The analytical results for the sediment samples indicated PCB levels below the cleanup criteria for sediment.

Arcadis collected two water samples from the Kalamazoo River (TS30034 and TS30035) and one rinsate sample (TS30036). The analytical results for the river samples and the rinsate sample indicated PCB levels below the cleanup criteria for water.

Arcadis also continued taking turbidity readings from three locations in the Kalamazoo River. All downstream turbidity readings were less than twice the upstream turbidity reading.

Arcadis also removed additional stop logs from the water control structure.

Suspect material was observed in Area 7B, and Terra was requested to re-excavate the area. Terra

completed the re-excavation, and discovered suspect material in Area 6B, which Terra then removed, as well. CDM and MDEQ collected four confirmation samples in Area 7B and five confirmation samples in Area 6B.
START recorded sample locations utilizing a GPS unit.

Terra continued to excavate sediment from the near-shore sections of Area 11B and the floodplain sections of Area 10A. Terra also continued sediment processing and load out activities at Staging Areas 3S, 4N, and 5S. Restoration activities were observed in Areas 7B to 9B. Terra shipped a total of 76 loads (3,491.48 tons) of non-TSCA-level sediment to the Ottawa Farms Landfill and the C&C Landfill. Terra also shipped a total of 14 loads (699.14 tons) of TSCA-level sediment to Wayne Disposal (EQ).

During the week ending June 14, 2008, Arcadis collected six sediment samples from Area 11B (TS20076 to TS20081). Arcadis split TS20076 with START (Note: The START-designated name for this sample is APS-060908-26-SD/TS20076). The analytical results for the Arcadis samples and the split sample indicated PCB levels below the cleanup criteria for sediment.

Arcadis also collected 22 water samples from the wastewater treatment system located at Staging Area 4N (W_SA4N_Influ_0003 through W_SA4N_Influ_0006, W_SA4N_MidA_0003 through W_SA4N_MidA_0006, W_SA4N_MidB_0003 through W_SA4N_MidB_0006, W_SA4N_EffluA_0003 through W_SA4N_EffluA_0006, W_SA4N_EffluB_0003 through W_SA4N_EffluB_0006, and W_SA4N_Dup_001 and W_SA4N_Dup_002). They also collected 31 water samples from the wastewater treatment system located at Staging Area 5S (W_SA5S_Influ_0001 through W_SA5S_Influ_0006, W_SA5S_MidA_0001 through W_SA5S_MidA_0006, W_SA5S_MidB_0001 through W_SA5S_MidB_0006, W_SA5S_EffluA_0001 through W_SA5S_EffluA_0006, W_SA5S_EffluB_0001 through W_SA5S_EffluB_0006, and W_SA5S_Dup_001). With the exception of Samples W_SA4N-EffluB_0003 and W_SA4N_Dup_0001, both of which had an analytical result of 0.1 mg/L, the analytical results for the effluent water treatment samples from both water treatment systems indicated PCB levels below the cleanup criteria for water. Note: Due to the detection of PCBs in the two samples mentioned above, Arcadis directed Terra to discharge the water, in the Staging Area 4N frac tank, into the settlement pond at Staging Area 4N, so that the water could be treated again. The follow-up effluent samples of the treated water at Staging Area 4N indicated PCB levels below the cleanup criteria for water.

Arcadis collected two water samples from the Kalamazoo River (TS30037 and TS30038) and one rinsate blank (TS30039). The analytical results for the river samples and the rinsate sample indicated PCB levels below the cleanup criteria for water.

Arcadis did not take any turbidity readings from in the Kalamazoo River, as there were no in-water excavations during this week.

Arcadis, Terra, START, and CDM examined the near-shore area with the aid of a Dredge Pack position locator device. After conducting this evaluation, all of the involved parties agreed that the sediment in the near shore section of Area 11A was less than 6 inches thick.

START also conducted core sampling in Area 6B. Suspect material was observed in Grids 2, 4, and 6. Samples collected included APS-061208-27-SD/K55354, APS-061208-27-SD-DP/K55354, APS-061208-28-SD/K55356, and APS-061208-29-SD/K55352. Analytical results indicated that two samples collected from Grids 4 and 6 exceeded the cleanup criteria for sediment. The remaining two samples were below the cleanup criteria.

Terra completed the load out of TSCA-level sediment from the Area 10B1 floodplain. Restoration continued in Area 11B, and Terra reinforced the river run rock barrier in Area 7B. Terra shipped a total of 63 loads (3,004.84 tons) of non-TSCA-level sediment to the Ottawa Farms Landfill and the C&C Landfill, and shipped a total of 12 loads (609.33 tons) of TSCA-level sediment to Wayne Disposal (EQ).

JFNew restored Area 7B by planting trees.

During the week ending June 21, 2008, Arcadis collected eight sediment samples from Area 10B (TS20082 to TS20089); two PCB wipe samples from two frac tanks that Terra had used at Staging Areas 5S and 4N (Frac Tank_01 and Frac Tank_02); five water samples from the wastewater treatment system located at Staging Area 4N (W_SA4N_Influ_0007, W_SA4N_MidA_0007, W_SA4N_MidB_00007, W_SA4N_EffluA_0007, and W_SA4N_EffluB_0007); two water samples from the Kalamazoo River (TS30040 and TS30041), and one rinsate blank (TS30042). With the exception of the river sample TS30040, which had a result of .00051 mg/L, the analytical results for the sediment samples, the wipe samples, the effluent water treatment samples, the remaining river sample, and the rinsate sample indicated PCB levels below the cleanup criteria for sediment and water. Note: Due to the fact that Arcadis collects the river samples only for data collection purposes, and uses the turbidity monitoring results to regulate the excavation operations in the river, Arcadis took no action in regard to the analytical result seen for Sample TS30040.

Arcadis also continued taking turbidity readings from three locations in the Kalamazoo River. Note: On June 19, 2008, Terra excavated two areas and, hence, Arcadis took turbidity readings from two sets of monitoring locations. All downstream turbidity readings were less than twice the upstream turbidity reading.

Terra continued to excavate sediments, including the near-shore sections of Areas11A and 11B and the floodplain section of Area 10B; continued sediment removal preparations by installing sheet piling and turbidity curtains in Areas 10A to 11A and 12B, and drove poles into the river bed to anchor the turbidity curtain in Area 10A; continued restoration activities by installing rip rap and river rock in Areas 10B and 11B; and staged sediment at, and loaded sediment from, Staging Areas 3S, 5S, and 4N. Terra shipped 27 total loads of non-TSCA-level sediment (1,197.53 tons) to the Ottawa Farms Landfill and the C & C Landfill, and shipped 20 loads of TSCA-level sediment (1,048.75 tons) to Wayne Disposal (EQ).

JFNew restored Areas 6B and 6B1 by planting trees, and replaced the silt curtain with biologs along the shoreline of Areas 7B to 8B.

Michigan Laser was onsite conducting a survey of the Area 10B excavation, as the GPS unit in one of Terra's excavators was not working properly.

Several interested parties were onsite to discuss the future activities in Area 13 in regards to the overspill on the north side of the Kalamazoo River during near-shore excavation activities in Area 12A. The Attendees included U.S. EPA, MDEQ, MDNR, the Fish and Wildlife Service, START, and Arcadis. During the discussion, Arcadis indicated the removal activities in Area 12A would not commence until minimal water was moving over the overflow. All of the water from the river would be directed over the water control structure.

During the week ending June 28, 2008, Arcadis collected eight sediment samples from Area 12B

(TS20090 to TS20097), three sediment samples from Area 10B1 (TS20098 to TS20100), two water samples from the Kalamazoo River (TS30043 and TS30044), and one rinsate sample (TS30045). Arcadis split TS20090 with START (Note: The START-designated name for this sample is APS-062408-30-SD/TS20090). The analytical results for the Arcadis sediment samples, the split sample, the water samples, and the rinsate sample indicated PCB levels below the cleanup criteria for sediment.

Terra continued to excavate sediments, including the near-shore sections of Areas 11A and 12B and began excavation of the floodplain sediments in Area 10B near the road; removed the sediment containment system, including poles and turbidity curtains, in Area 10B; continued restoration activities by installing rip rap and river rock in Area 10B and 11B and placing topsoil in Area 9B; and staged and loaded sediment at Staging Areas 3S, 5S, and 4N. Terra also loaded and shipped TSCA-soil that had been stockpiled in the floodplain area of Area 12A. Terra shipped a total of 68 loads (3,243.09 tons) of non-TSCA-level sediment to the Ottawa Farms Landfill and the C&C Landfill, and shipped a total of 34 loads (1,745.52 tons) of TSCA-level sediment to Wayne Disposal (EQ).

JFNew restored Areas 9A to 10A and Areas 6B to 9B by planting trees.

Consumers Energy was onsite to remove and relocate the utility pole located along the near-shore section of Area 7B. Consumers Energy moved the pole approximately 35 feet south of its original position.

State Representative Bob Jones was onsite in Area 10B, assessing site operations. Representatives from U.S. EPA, MDNR and Arcadis were present during Mr. Jones' visit.

During the week ending July 5, 2008, Arcadis collected five water samples from the wastewater treatment system located at Staging Area 4N (W-SA4N-Influ-008, W-SA4N-MidA-008, W-SA4N-MidB-008, W-SA4N-EffluA-008, and W-SA4N-EffluB-008), and six water samples from the wastewater treatment system located at Staging Area 5S (W-SA5S-Influ-007, W-SA5S-MidA-0007, W-SA5S-MidB-0007, W-SA5S-EffluA-0007, W-SA5S-EffluB-0007, and W-SA5S-Dup-0003). The analytical results for the effluent water treatment samples indicated PCB levels below the cleanup criteria for water. Arcadis also collected four water samples from the Kalamazoo River (TS30046 through TS30049). The analytical results for the effluent water treatment samples indicated PCB levels below the cleanup criteria for water. Arcadis did not conduct turbidity monitoring during the week.

Arcadis collected three sediment samples from Area 10B (TS20101 through TS20103) and four sediment samples from Area 11B (TS20104 through TS20107). Two sediment samples had detectable levels; however, the samples did not exceed the cleanup criteria for sediment. START collected a split sample of TS20101 and a duplicate, which were submitted as APS-063008-31-SD/TS20101 and APS-063008-31-SD-DP/TS20101. The analytical results for the Arcadis sediment samples and the two split samples indicated PCB levels below the cleanup criteria for sediment.

Terra continued to load out TSCA sediment from Staging Area 3S and non-TSCA sediment from Staging Areas 4N and 5S. Terra completed excavation of the floodplain sediments and began restoration in Area 10B. Terra also excavated floodplain sediment from Areas 11A and 12A, as well as floodplain sediment and the access road soil from Areas 11B and 12B. Terra shipped a total of 24 loads (1,296.27 tons) of non-TSCA-level sediment to the Ottawa Farms Landfill and the C&C Landfill, and shipped a total of 24 loads (1,220.66 tons) of TSCA-level sediment to Wayne

Disposal (EQ).

During the week ending July 12, 2008, Arcadis collected six water samples from the wastewater treatment system located at Staging Area 4N (W_SA4N_Influ_0009, W_SA4N_MidA_0009, W_SA4N_MidB_0009, W_SA4N_EffluA_0009, W_SA4N_EffluB_0009, and W_SA4N_Dup_0003), and twelve water samples from the wastewater treatment system located at Staging Area 5S (W_SA5S_Influ_0008, W_SA5S_Influ_0009, W_SA5S_MidA_0008, W_SA5S_MidA_0009, W_SA5S_MidB_0008, W_SA5S_MidB_0009, W_SA5S_EffluA_0008, W_SA5S_EffluA_0009, W_SA5S_EffluB_0008, W_SA5S_EffluB_0009, W_SA5S_Dup_0002, and W_SA5S_Dup_0004). The analytical results for the effluent water treatment samples indicated PCB levels below the cleanup criteria for water.

Arcadis also collected two water samples from the Kalamazoo River (TS30050 and TS30051) and one rinsate sample (TS30052). The analytical results for the river and rinsate samples indicated PCB levels below the cleanup criteria for water.

Arcadis collected ten sediment samples from Area 12B (TS20108 through TS20114, and TS20118 through TS20120) and eleven sediment samples from Area 11A (TS20115 through TS20117, and TS20121 through TS20128). Two samples exceeded the cleanup criteria for sediment (TS20117 and TS20128). Terra re-excavated and resampled the grids from which Arcadis collected these two sediment samples (Grid 5 TSCA and Grid 6 Bank Shore). The remaining samples did not exceed the cleanup criteria for sediment.

Arcadis took turbidity readings from three locations in the Kalamazoo River (from one location upstream and two locations downstream of the Areas 12B and 11A). All downstream readings were less than twice the upstream measurement.

Terra continued sediment loadout from Staging Areas 3S, 4N, and 5S. Decommissioning of Staging Area 3S commenced, and Terra continued restoration activities in Areas 10A, 10B, and 10B1. Terra continued to excavate sediment from the floodplain, bank, and near-shore sections of Area 11A, and the floodplains of Areas 12A and 12B. Terra stockpiled and directly loaded TSCA-level sediment from Area 13A. Terra also removed the header wall from Area 11B and installed the header wall in Area 12A. Terra also removed the turbidity curtain from Area 12B and installed the curtain along the perimeter of Area 12A.

Terra shipped a total of 44 loads (2,313.58 tons) of non-TSCA-level sediment to the Ottawa Farms Landfill and the C&C Landfill, and shipped a total of 39 loads (2,011.51 tons) of TSCA-level sediment to Wayne Disposal (EQ).

During the week ending July 19, 2008, Arcadis collected twelve water samples from the wastewater treatment system located at Staging Area 4N (W_SA4N_Influ_0010 and W_SA4N_Influ_0011, W_SA4N_MidA_0010 and W_SA4N_MidA_0011, W_SA4N_MidB_0010 and W_SA4N_MidB_0011, W_SA4N_EffluA_0010 and W_SA4N_EffluA_0011, W_SA4N_EffluB_0010 and W_SA4N_EffluB_0011, W_SA4N_Dup_0005 and W_SA4N_Dup_0006) and six water samples from the wastewater treatment system located at Staging Area 5S (W_SA5S_Influ_0010, W_SA5S_MidA_0010, W_SA5S_MidB_0010, W_SA5S_EffluA_0010, W_SA5S_EffluB_0010, and W_SA5S_Dup_0005). Arcadis also collected two water samples from the Kalamazoo River (TS 30053 and TS 30054). Note, a rinse blank was not submitted. The analytical results for the effluent water treatment samples and the river water samples indicated PCB levels below the cleanup criteria for water.

Arcadis collected three sediment samples from Area 11A (TS20129 through TS20131), two of which were resamples. Two samples exceeded the cleanup criteria for sediment (TS20129 and TS20130). After Terra re-excavated the grid from which Arcadis had initially collected Samples TS20129 and TS2130 (Grid 6 TSCA), Arcadis resampled the grid. The remaining soil sample did not exceed the cleanup criteria for soil.

Arcadis also continued taking turbidity readings from three locations in the Kalamazoo River (one upstream and two downstream of the Area 11A excavation, on July 14, 2008, and one upstream and two downstream of the Area 12A excavation, from July 15 through July 17, 2008). All downstream readings were less than twice the upstream measurement. However, a visible plume was observed on July 15 and 16, 2008. The excavation activities were shutdown, and additional posts were installed for the turbidity curtain.

Terra continued restoration activities, along with JFNew, in Areas 11B and 12B. Terra began installing a header wall for the Mid-Channel B excavation; continued the excavation of near-shore sediments from Area 11A; and installed sheetpiling along the perimeter of the Mid-Channel B excavation area. Terra installed sheet piling along the perimeter of the Mid-Channel B area in order to ensure that the Area 12A turbidity curtain remained intact. However, while Terra was pulling the curtain to tie it to the sheet piling, tears were observed in the curtain.

Terra excavated additional TSCA sediment from the near-shore section of Area 12A, and stockpiled this sediment in Area 13A for later direct-loading into dumptrucks for offsite disposal. Terra continued processing sediment at Staging Area 4N, and completed the decommissioning of Staging Area 3S. Terra transported 45 loads (2,275.16 tons) of tree stumps and non-TSCA-level sediment to the Ottawa Farms Landfill. In addition, Terra transported 35 loads, (1,814.48 tons) of TSCA-level sediment to Wayne Disposal (EQ).

During the week ending July 26, 2008, Arcadis collected ten water samples from the wastewater treatment system located at Staging Area 4N (W-SA4N-Influ-0012 and W-SA4N-Influ-0013, W-SA4N-MidA-0012 and W-SA4N-MidA-0013, W-SA4N-MidB-0012 and W-SA4N-MidB-0013, W-SA4N-EffluA-0012 and W-SA4N-EffluA-0013, and W-SA4N-EffluB-0012 and W-SA4N-EffluB-0013). The analytical results for the effluent water treatment samples indicated PCB levels below the cleanup criteria for water.

Arcadis also collected two water samples from the Kalamazoo River (TS30055 and TS30056), and one rinsate blank (TS30057). The analytical results for the river and rinsate samples indicated PCB levels below the cleanup criteria for water.

Arcadis collected four sediment samples from Area 11A (TS20132 through TS20135). One sediment sample, TS20133, was a re-sample from Grid 6BS, due to the exceedance of Sample TS20129 and TS20130. Sample TS20133 exceeded the cleanup criteria for sediment, with a level of 15.0 mg/kg. Sample TS20134 was a re-sample of the TSCA portion of Grid 5 in Area 11A (Sample TS20128 exceeding the cleanup criteria). Sample TS20134 exceeded the cleanup criteria for sediment, with a level of 9.5 mg/kg. Terra re-excavated the grid, and Arcadis re-sampled the grid (TS20135). Sample TS20135 also exceeded the cleanup criteria, with a level of 14.0 mg/kg.

From July 21 to July 25, 2008, Arcadis conducted turbidity monitoring on the Kalamazoo River at Area 12A, at one upstream location and two downstream locations. On July 24, 2008, Arcadis performed turbidity monitoring near Area 11A, at one upstream location and two downstream locations. On July 23, 2008, Arcadis detected a visible plume in Area 11A (though the downstream results were less than twice the upstream results). Arcadis shut down the excavation

operations, and Terra secured the turbidity curtain. Afterward, operations continued. A plume was still visible, so the operations ceased and Terra inspected the curtain again. Operations continued without further incident. All of the remaining downstream results were less than twice the upstream results, with no visible plumes.

Terra continued to load out TSCA sediment stockpiled in Area 13A, and non-TSCA sediment from Staging Area 4N. The pad at Staging Area 3S was decommissioned, and some of the stone from the haul road was transferred to temporary roads in the northern areas. Terra continued excavation of sediments in Areas 10A, 11A and 12A. Sheet piling was installed for the Mid-Channel B excavation.

Terra re-excavated three grids (Grids 4 to 6) in Area 6B, due to visible suspect material on the surface and sample results. This area was re-excavated and backfilled.

Terra transported a total of 43 loads (2,176.63 tons) of non-TSCA-level sediment to the Ottawa Farms Landfill, and transported a total of 39 loads (1,885.09 tons) of TSCA-level sediment to Wayne Disposal (EQ).

The King Company began preparing for the construction of the Phase 2 Coffer Dam immediately upstream of the Plainwell Dam, and JFNew continued restoration activities in Areas 10B to 12B.

During the week ending August 2, 2008, Arcadis collected five sediment samples from the bank of Area 12A (TS20136 to TS20140), one sediment sample from the bank of Area 11A (TS20141), two water samples from the Kalamazoo River (TS30058 and TS30059), and one rinsate sample (TS30060). All five samples collected from Area 12A had an analytical result lower than 5.0 mg/kg. However, the sample collected from Area 11A had a result that was greater than 5.0 mg/kg. As a result, Arcadis directed Terra to excavate an additional six inches of sediment from the grid from which Arcadis collected the sample; specifically, Grid 8BS. The analytical results for the river and rinsate samples indicated PCB levels below the cleanup criteria for water.

Arcadis monitored the turbidity of the Kalamazoo River at one location upstream and two locations downstream of Area 12A and Mid-Channel B. On July 29 and 30, Arcadis observed a visible plume along the bank, adjacent to Mid-Channel B, and downstream of the Mid-Channel B turbidity curtain. However, the downstream turbidity readings were not more than twice the value of the upstream turbidity reading. Even given this situation, Terra installed an additional turbidity curtain adjacent to Mid-Channel B that ran parallel to the bank. On July 31 and August 1, Arcadis observed a visible plume, and observed downstream turbidity readings that were more than twice the upstream readings. As a result, Arcadis directed Terra to suspend the excavation operations in Mid-Channel B, and to install additional sheet pilings toward the bank. On August 2, none of the downstream turbidity readings was more than twice the upstream reading.

Terra continued restoration activities in Area 12B; excavation of sediment from Mid-Channel B; spreading of topsoil in Area 10B; and excavation of sediment from the bank of Area 12A; and treating sediment at Staging Area 4N. Terra completed the restoration of the grids in Area 6B from which Terra had excavated additional sediment during the week ending July 26, 2008. Terra covered the access road to Staging Area 3S with clean topsoil, and removed the access road to Area 10B. Terra transported 46 loads (2,327.5 tons) of non-TSCA sediment to the Ottawa Farms Landfill.

The King Company began constructing the Phase 2 Coffer Dam immediately upstream of the Plainwell Dam, and JFNew conducted restoration activities in Area 12B.

During the week ending August 9, 2008, Arcadis collected two sediment samples from the bank of Area 12 (TS20142 and TS20143), one sediment sample from the floodplain of Area 11A (TS20144), two sediment samples from the bank of Area 11A (TS20145 and TS20146), two water samples from the Kalamazoo River (TS30061 and TS30062), and one rinsate sample (TS30063).

The two samples from Area 12A and one sample from Area 11A (TS20144) had an analytical result lower than 5.0 mg/kg. However, the samples collected from Grids 6 and 8 in Area 11A had a result that was greater than 5.0 mg/kg. As a result, Arcadis directed Terra to excavate an additional six inches of sediment from these grids. The analytical results for the river and rinsate samples are not yet available.

Arcadis also continued taking turbidity readings from three locations in the Kalamazoo River (one upstream and two downstream of the Area 11A, Area 12A, and Mid-Channel B). All downstream readings were less than twice the upstream measurement.

Terra continued to excavate sediment from Mid-Channel B, the bank, nearshore section, and floodplain of Area 12A, and the bank of Area 11A; continued maintenance operations related to the turbidity curtains and sheet pilings; and treated sediment at Staging Area 4N. Terra transported 69 loads (3,436.99 tons) of non-TSCA sediment to the landfill, and eleven loads (701.67 tons) of TSCA sediment to Wayne Disposal (EQ).

King Company continued and completed the construction of the Phase 2 Coffer Dam.

During the week ending August 16, 2008, Arcadis collected one sediment sample from the bank of Area 12A (TS20147), six sediment samples from the floodplain of Area 12A (TS20148 to TS20153), including one duplicate (TS20151), one wipe sample from a Terra vacuum truck ((VT-1) (081108)), five water samples from the water treatment system located at Staging Area 5S (W_SA5S_Influ_0011, W_SA5S_MidA_0011, W_SA5S_MidB_0011, W_SA5S_EffluB_0011, and W_SA5S_EffluB_0011), one nine-point composite soil sample from the Area 11A material that Arcadis plans on using as wetland material (TS10000), two water samples from the river (TS30064 and TS30065), and one rinsate sample (TS30066). Note: Arcadis split Sample TS20150 with START, with the START-designated name being APS-081208-35-SD/TS20150.

The analytical results for all seven sediment samples collected from Area 12A were below 5.0 mg/kg, and the wipe sample from the Terra vacuum truck was below the 10 µg/100cm2 cleanup criteria.

All five water treatment samples were non-detect, while the analytical results for the composite soil sample from Area 11A indicates PCB levels below the cleanup standard for sediment.

Terra continued the excavation of sediment from the bank and floodplain of Area 12A; began to excavate the overburden material from Area 11A that Arcadis intends on using as wetland material (as long as the overburden material is deemed clean through sample analysis); began and completed the removal of sheet pilings that had provided protection against the river while Terra excavated Mid-Channel B; and initiated and completed the re-excavation of Grids 6 and 8 in Area 11A. Terra transported 46 loads (2,319.50 tons) of non-TSCA-level sediment to the Ottawa Farms Landfill and the C & C Landfill and 23 loads (1,185.74 tons) of TSCA-level sediment to Wayne Disposal (EQ).

Planned Removal Actions

See Pollution Report #1.

Next Steps

Continue to remove stop logs from Water Control Structure. Continue removing floodplain soil from Removal Area 13A, soil and sediment from Mid-Channel Area A and Removal Area 13B, and begin soil and sediment removal activities within Phase 2 Cofferdam area. Begin and complete the restoration of Areas 10A, 11A, 12A and 13A.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
RST/START	$427,000.00	$281,864.00	$145,136.00	33.99%
Intramural Costs				
Total Site Costs	$427,000.00	$281,864.00	$145,136.00	33.99%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

www.epaosc.net/kzooplainwell